

## **REMARKS**

Following this amendment claims 1-6, 9-18, 29-31, 35-36 and 39 will be pending. Support for the claims as amended may be found on page 5, lines 29-32, the examples and throughout the application as originally filed. No new matter is added as a result of this amendment. Applicant believes the current amended claims and remarks below address the Examiner's remaining concerns.

### **Summary of the Advisory Action**

Claims 1-6, 9, 12-18 and 31 were rejected under 35. U.S.C. § 103(a) as being unpatentable over Laustsen (U.S. Patent 6,080,564) in view of Larsen (WO 95/29999), Heinsohn (U.S. Patent 5,215,908) and Ward (*Biotechnol* 8:435-440, (1990)). Claims 1-6, 9-18, 29-31, 35, 36 and 39-41 were rejected under 35. U.S.C. § 103(a) as being unpatentable over Laustsen in view of Larsen and Heinsohn and Ward (*Biotechnol* 8:435-440, (1990)).

### **35 U.S.C. §103(a)**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Initially, Applicant directs the Examiner's attention to the amendment of claim 1, wherein the undesired enzyme being inactivated is glucoamylase.

On page 3 of the Advisory Action the USPTO admits "that Laustsen does not *specifically* teach the use of a pH range of about 1.5 to about 1.9", but states that since Larsen teaches that chymosin is *activated* at this pH, an ordinarily skilled artisan would recognize that a pH treatment 'in the range of 1.5 to 2.5 including a pH of about 2.0' as taught by Larsen *could not* inactivate chymosin." [Emphasis in Original]. Applicant respectfully submits that the combined references do not teach or suggest a method for a medium comprising chymosin with glucoamylase which is then subjected to a pH of about 1.5 to about 1.9 to at least partially inactivate the glucoamylase while at least partially maintaining the activity of the chymosin. Further, Applicant submits that given the purposes of the Ward and Heisohn one would not be motivated to combine any of the four references to achieve the claimed method. Particularly,

Heinsohn relates to chromatographic purification, Ward is directed toward the production of chymosin using a fusion protein to increase production and Larsen is directed toward separating milk clotting aspartic endopeptidases and converting them to active endopeptidases. Prior art references in combination do not make an invention obvious unless something in the prior references would suggest the advantage to be derived from combining their teachings. *In re Sernaker*, 217 U.S.P.Q. 1, 6 (Fed. Cir. 1983). A combination may be patentable whether it be composed of elements all new, partly new or all old. *Rosemont, Inc. v. Beckman Instruments, Inc.*, 221 U.S.P.Q. 1, 7 (Fed. Cir. 1984). There must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Lindemann v. Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984). *Interconnect Planning Corporation v. Feil, et al.*, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985). In the present case there is no such motivation. This is particularly true given the recitation in Applicant's claims to chymosin as the polypeptide and glucoamylase as the undesired enzymatic activity.

For all the reasons discussed above, Applicant's claims are patentable in view of the references of record. The rejection is respectfully traversed.

### CONCLUSION

Applicant asserts that the application is in condition for allowance. Reconsideration and allowance of all pending claims is respectfully requested. Should any outstanding issues remain, the Examiner is invited to telephone the undersigned at 202-955-1926.

Respectfully submitted,

HUNTON & WILLIAMS

Dated: June 19, 2003

By: 

Stanislaus Aksman  
Registration No. 28,562  
Jeffrey T. Perez  
Registration No. 52,110

HUNTON & WILLIAMS  
1900 K Street, NW, Suite 1200  
Washington, DC 20006-1109  
(202) 955-1500 (Telephone)  
(202) 778-2201 (Facsimile)